

Amendments to the Claims

1. (Currently amended) A display driver for an active matrix electroluminescent display, the display comprising a plurality of electroluminescent ~~display elements~~ pixels each associated with a ~~display element~~ pixel comprising a pixel driver circuit, each said ~~display element~~ pixel driver circuit including a drive field effect transistor having a gate connection for driving the associated ~~display element~~ pixel in accordance with a voltage on the gate connection, the display driver comprising:

a plurality of adjustable constant current generators each for driving a row or column of said display ~~elements~~ with an adjustable constant current determining said voltage on said gate connection of said pixel driver circuit;

a display element brightness controller configured to control said plurality of adjustable constant current generators to drive said gate connections to control the electroluminescent output from said ~~display elements~~ pixels;

a voltage sensor to sense a said voltage on a said gate connection; and

a power controller coupled to said voltage sensor for controlling an adjustable voltage power supply to said plurality of adjustable constant current generators, said power controller being configured to reduce said power supply voltage in response to said sensed voltage to a point where a voltage of said adjustable voltage power supply is just sufficient for a said adjustable constant current generator[[s]] with a highest output current to be able to provide a highest gate connection voltage, said highest gate connection voltage being determined by said highest output current in accordance with a compliance of said adjustable constant current generator with said highest output current.

2. (Canceled)

3. (Canceled)

4. (Previously Presented) A display driver as claimed in claim 1 wherein said voltage sensor is configured to sense the voltage on a said gate connection by sensing the voltage on an electrode of said display.

5. (Canceled)

6. (Canceled)

7. (Currently amended) A display driver as claimed in claim 1 wherein a said ~~display-element-driver-circuit~~ pixel includes a photodiode, and wherein a photocurrent through said photodiode is determined by a said adjustable constant current to determine a brightness of said ~~display-element~~ pixel.

8. (Canceled)

9. (Canceled)

10. (Currently Amended) A display driver as claimed in claim 1 wherein said highest output current is provided to a ~~display-element~~ pixel having a maximum brightness relative to others of said ~~display-elements~~ pixels.

11. (Canceled)

12. (Canceled)

13. (Currently amended) A display driver as claimed in claim 32 wherein said power controller is further configured to increase said power supply voltage when said gate connection voltage of said brightest ~~display-element~~ pixel has not reduced to less than a threshold value after a predetermined interval.

14. (Previously Presented) A display driver as claimed in claim 1 further comprising said adjustable voltage power supply.

15. (Canceled)

16. (Canceled)

17. (Currently amended) A method of operating an active matrix electroluminescent display, the display comprising a plurality of pixels each ~~with pixel~~ comprising an associated pixel driver, each said pixel driver including a drive field effect transistor having a gate connection for driving the associated display element in accordance with a voltage on the gate connection, the display having a plurality of adjustable constant current generators each for driving a row or column of said display ~~element~~ with an adjustable constant current determining said voltage on said gate connection, an adjustable voltage power supply to said plurality of adjustable constant current generators, and a plurality of control lines for setting the brightness of each pixel, the method comprising:

controlling said plurality of adjustable constant current generators to drive said gate connections to set the brightness of pixels of the display using said control lines;

monitoring control lines of the display to sense said voltages on said gate connections; and

reducing said power supply voltage responsive to said monitoring to a point where a voltage of said adjustable voltage power supply is just sufficient for a said adjustable constant current generator with a highest output current to be able to provide a highest said gate connection voltage, said highest gate connection voltage being determined by said highest output current in accordance with a compliance of said adjustable constant current generator with said highest output current.

18. (Canceled)

19. (Canceled)

20. (Canceled)

21. (Canceled)

22. (Canceled)

23. (Currently Amended) A method as claimed in claim 17 wherein a said pixel driver includes a photodiode and wherein a current through said photodiode is determined by said adjustable constant current.

24. (Canceled)

25. (Canceled)

26. (Canceled)

27. (Original) An active matrix display driver configured to operate in accordance with the method of claim 17.

28. (Original) A display driver as claimed in claim 1 wherein said electroluminescent display comprises an organic light emitting diode display.

29. (Canceled)

30. (Previously Presented) A display driver as claimed in claim 32 wherein said electroluminescent display comprises an organic light emitting diode display.

31. (Original) A method as claimed in claim 17 wherein said electroluminescent display comprises an organic light emitting diode display.

32. (Currently Amended) A display driver for an active matrix electroluminescent display, the display comprising a plurality of electroluminescent ~~display elements~~ pixels each associated with ~~comprising a display element pixel~~ driver circuit, each said ~~display element pixel~~ driver circuit including a drive field effect transistor having a gate connection for driving the associated display element in accordance with a voltage on the gate connection and a capacitor coupled to said gate connection and a photodiode coupled across said capacitor to reduce said gate connection voltage in accordance with the brightness of the pixel, said display being configured for cyclical driving, said gate connection voltage gradually decaying by a current flow through said photodiode according to the brightness of the associated ~~electroluminescent display element pixel~~, the display driver comprising:

a display element brightness controller to cyclically drive said display and configured to provide an output to drive a said gate connection to control the electroluminescent output from said ~~display elements~~ pixels;

a voltage sensor to sense a said voltage on a said gate connection; and

a power controller coupled to said voltage sensor for controlling an adjustable voltage power supply to provide an adjustable voltage to said electroluminescent display to power said drive transistors for driving said ~~display elements~~ pixels, said power controller being configured to reduce said power supply voltage in response to said sensed voltage such that said gate connection voltage of a brightest said ~~display element pixel~~ has decayed sufficiently to switch said brightest ~~display element pixel~~ off at the end of a driving cycle of said display.

33. (Previously Presented) A display driver as claimed in claim 32 further comprising said adjustable voltage power supply.